

REMARKS/ARGUMENTS

Claims 1-3, 5-6, 8-9, 11-17, 19-20, and 22-23 are pending in this application, with claims 1, 8, and 15 being the only independent claims. Reconsideration of the above-identified application, as herein amended and in view of the following remarks, is respectfully requested.

Claim Amendments

Independent claims 1, 8, and 15 are each amended to recite that the displayed part of a virtual view is changed in response to user actions, and that the location of the cursor and the part of the virtual view on the display are changed in accordance with the determined relation between the cursor location and the location of the displayed part within the virtual view. Support for these amendments is found at page 4, line 35 to page 5, line 7; and Fig. 2 of the present application, as originally filed.

Claims 3, 5, 17, and 19 are amended to implement editorial corrections.

Claim 14 is canceled without prejudice or disclaimer.

Rejections of the Claims under 35 U.S.C. §103

Claims 1-3, 5-6, 15-20, and 22-23 stand rejected under 35 U.S.C. §103 as unpatentable over U.S. Patent No. 5,602,566 (Motosyuku) in view of U.S. Patent No. 7,124,374 (Haken) and further in view of U.S. Patent No. 6,157,368 (Fager).

Claims 8-9 and 11-13 stand rejected under 35 U.S.C. §103 as unpatentable over Motosyuku in view of Haken and further in view of U.S. Patent No. 6,937,140 (Outslay).

Claim 14 stands rejected under 35 U.S.C. §103 as unpatentable over Motosyuku, Haken, and Outslay, and further in view of Fager.

Before discussing the cited prior art and the Examiner's rejections of the claims in view of that art, a brief description of the subject matter described in the present application is

deemed appropriate to facilitate understanding of the arguments for patentability. This description is not meant to argue unclaimed subject matter.

The present invention relates to a method, device, and computer program for displaying a cursor on the display of an electronic device, wherein only a portion (a displayed part) of a larger image (a virtual view) is displayed on the display. According to the present invention, there is a correlation between the cursor location on the display and the location of the displayed part within the virtual view. This correlation allows the user to quickly perceive the location of the displayed part.

Fig. 5 of the present application illustrates this concept using three examples. In the top example, the displayed part 62 shown on the display is a central portion of the larger virtual view 64, and the cursor 60 is shown at the center of the display 40. In the second or middle example in Fig. 5, the displayed part 62 shown on the display is that portion in the upper right corner of the larger virtual view 64 and the cursor 60 is at the upper right corner of the display 40. Lastly, the third or bottom example in Fig. 5 shows that the displayed part 62 is a portion that is a central portion along the bottom of the larger virtual display 64 and the cursor 60 centered along the bottom of the display 40.

Independent claim 1 recites “displaying the cursor and only a part of a virtual view on the display of the electronic device” and “determining continuously a relation between the cursor location on the display and the location of the displayed part of the virtual view within the whole virtual view so that the location on the display reflects the location of the displayed part of the virtual view”.

The combination of Motosyuku, Haken, and Fager fails to disclose, teach or suggest these limitations.

Motosyuku discloses an information processor capable of scrolling in response to tilting the device. According to Motosyuku, a display unit 106 reads out one frame of display data 202, pointed to by a pointer value 201 stored in a pointer 107, and displays the read data on the display screen 203 (see col. 3, lines 17-22; and Fig. 2 of Motosyuku). Also disclosed by Motosyuku is a switch 110 which maintains a command for scrolling when depressed (col. 3, lines 32-35). A tilt sensor 104 is read and the display is scrolled through the display data 22 in response to the tilt angle when the switch 110 is “ON” (col. 3, lines 8-53). Scrolling is accomplished by incrementing or decrementing the pointer value 201 (see col. 3, lines 22-25)

The Examiner previously acknowledged that Motosyuku fails to disclose a cursor. The Examiner now alleges that the step of “displaying the cursor” is disclosed in Fig. 1, element 107 of Motosyuku. However, as indicated above, the pointer 107 is actually a memory location that stores a pointer value 201 indicating a position in the display storage unit 105. Thus, the pointer 107 in Fig. 1 of Motosyuku can not be considered to be a cursor.

Since Motosyuku fails to disclose a cursor, Motosyuku also fails to disclose “determining continuously a relation between the cursor location on the display and the location of the displayed part of the virtual view within the whole virtual view so that the location on the display reflects the location of the displayed part of the virtual view”, as expressly recited in independent claim 1. The Examiner alleges that this is disclosed at col. 4, lines 34-53, col. 5, lines 18-43, and col. 3, lines 44-56 of Motosyuku.

The Examiner-cited sections of Motosyuku describes how the user scrolls the content in the display of the hand-held device. However, as described above, the scrolling in Motosyuku is performed by incrementing or decrementing a pointer value in response to tilting the hand-held device. Accordingly, Motosyuku fails to teach or suggest anything about

“determining continuously a relation between the cursor location on the display and the location of the displayed part of the virtual view within the whole virtual view so that the location on the display reflects the location of the displayed part of the virtual view”, as expressly recited in independent claim 1.

The Examiner further alleges that the cursor disclosed by Haken combined with the teachings of Motosyuku discloses the claimed cursor. Haken relates to a graphical interface control system for a computer. According to Haken, a computer 10 includes a sensor which allows a computer to be aware of a relative direction from the display screen to each of separate processor devices connected to the computer, e.g., a docked PDA, a digital camera, a laptop computer, a scanner, a mobile phone, a television, or a VCR (see col. 2, lines 29-35 and 63-65 of Haken). During operation, the user moves a mouse or other input device to move a cursor 102 on the display screen 12 to select one of the processor devices (col. 3, lines 16-21). If the cursor is moved to an edge area associated with one of the devices, the input signal from the mouse is transferred to that device (col. 3, lines 40-45). Thus, according to Haken, the cursor can be moved from the computer screen 12 to the screen of one of the devices (see col. 3, lines 45-55).

Since Haken discloses that the cursor moves from the computer screen to one of screens of the adjacent devices, Haken fails to disclose that the screen on the computer display 12 changes to a different part of a virtual view. Furthermore, the location of the cursor on any of the computer screen 12 or the screens of the devices in Haken has no relation to a location of a partial view of an overall virtual view because Haken fails to disclose a partial view. In contrast, the combined screens of Haken always show a full view. Accordingly, Haken fails to disclose, teach or suggest “determining continuously a relation between the cursor location on the display and the location of the displayed part of the virtual view within the whole virtual view so that the

location on the display reflects the location of the displayed part of the virtual view”, or “changing, in accordance with the determined relation, the location of the cursor and the part of the virtual view on the display”, as expressly recited in independent claim 1.

The Examiner combines the cursor of Haken with the pointing device of Motosyuku. However, as stated above, the pointer of Motosyuku is merely a memory storing a pointer value 201 that indicates a position in the display storage unit 105. In contrast, the cursor of Haken is an image on a display. Thus, the cursor of Haken and the pointer 107 of Motosyuku are not directly combinable or replaceable.

Fager fails to teach that which Motosyuku and Hakem lack. Fager relates to control equipment with a movable control member. The position and orientation of the control member 1 is determined based on signals it receives from signal sources $M_1, M_2, M_3 \dots M_n$ (col. 6, lines 25-40 of Fager). Movement of the controller is used to control a control element such as a robot (col. 9, lines 60-62). Fager does disclose that the controlled equipment may be a cursor on a computer display. However, Fager fails to disclose anything about changing a displayed portion of a large display. Accordingly, Fager fails to disclose “determining a relation between the cursor location on the display and the location of the displayed part of the virtual view within the whole virtual view so that the location on the display reflects the location of the displayed part of the virtual view”, and “changing, in accordance with the determined relation, the location of the cursor and the part of the virtual view on the display”, as expressly recited in independent claim 1.

The Examiner alleges that Fager discloses determining a deviation. Even if Fager is considered to disclose that the deviation of the control member 1 is determined, which applicant maintains not to be true, Fager still fails to teach or suggest “determining a relation between the cursor location on the display and the location of the displayed part of the virtual

view within the whole virtual view so that the location on the display reflects the location of the displayed part of the virtual view”, and “changing, in accordance with the determined relation, the location of the cursor and the part of the virtual view on the display”, as expressly recited in independent claim 1.

Accordingly, independent claim 1 is also allowable over Motosyuku and Hakem in view of Fager.

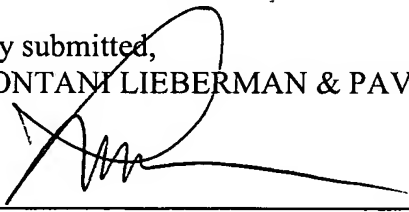
Independent claims 8 and 15 include limitations that are similar to the above limitations of independent claim 1. Accordingly, independent claims 8 and 15 should be allowable for the same reasons as is independent claim 1.

Dependent claims 2-3, 5-6, 9, 11-14, 16-17, 19-20, and 22-23 are allowable for at least the same reasons as are independent claims 1, 8, and 15, as well as for the additional recitations contained therein.

It is believed that no fees or charges are required at this time in connection with the present application. However, if any fees or charges are required at this time, they may be charged to our Patent and Trademark Office Deposit Account No. 03-2412.

Respectfully submitted,
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